

### Amendment to the Specification

Please replace the second full paragraph on page 17 of the specification with the following amended paragraph:

There is more specifically disclosed a method for continuous preparation of a hydrous zirconia sol in a tubular reactor having one reaction tube as illustrated in Fig.2a. The reaction tube(2) in which the aqueous solution of a zirconium salt(3) flows, passes through the reactor(1). The heat needed for hydrolyzing and precipitating the aqueous solution of a zirconium salt is provided by microwave(14) supplied into the reactor(1). The said microwave(14) is generated in a microwave generator(15), is supplied through the microwave supplying section(16) connected with the metallic shell of the reactor(1). The microwave supplied thereby passes through the wall of the reaction tube(2) and is absorbed and ~~than~~ then transformed to heat in the aqueous solution of a zirconium salt maintaining a flow state.

Please replace the first full paragraph on page 26 with the following amended paragraph:

The solvent used for the aqueous solution of a zirconium salt in the said reaction tube should satisfy the following formula when measured at 25°C to satisfy at the same time both the flow characteristic and the uniform heating of the reactant according to the present invention:

$$\rho \cdot u \cdot D / \mu \leq 2,000$$

wherein,  $\rho$  represents the density (g/cm<sup>3</sup>) of the solvent,  $\mu$  the viscosity (g/cm•sec) of the solvent,  $u$  the average flow velocity (cm/sec) of the solvent, and D the diameter or equivalent diameter of the

cross section. Further, there is no problem even in a low value of not more than 1,000 in which the characteristic of the laminar flow dominated by shear stress is remarkably appeared.

Please replace the paragraph bridging pages 30-31 with the following amended paragraph:

Otherwise, the suspension(3b) leaving the reaction tube(2) may be mixed with a pH control agent(12) in a separate mixer(13), as illustrated in Fig.2a. The mixer(13) may be a stirred-type vessel equipped with an agitation means or a vessel without ~~with~~ an agitation means wherein a suspension(3b) and a pH control agent(12) are mixed with each other in a just flowing state. Alternatively, as illustrated in Fig.2b, they may be mixed before or after the outlet of the reaction tube of the tubular reactor or in the outlet tube of the suspension(3b) without ~~with~~ an agitation means. In addition to this method, it is also possible to control the pH value of a hydrous zirconia sol by continuously or intermittently adding a pH control agent(12) to the reservoir storing the suspension(3b) leaving the tubular reactor. The ammonia concentration of an ammonia aqueous solution is not specifically limited, but about 0.01 ~ 10N of ammonia water is preferable.

Please replace the first paragraph of Example 1 on page 41 of the specification with the following amended paragraph:

0.04 mole of zirconium oxychloride and 1g of hydroxy propyl cellulose are dissolved in one liter of the solvent mixture of 1-propyl alcohol and water (a molar ratio of 1.2) to prepare the aqueous solution of a zirconium salt. The aqueous solution of a zirconium salt is continuously supplied to a ~~quarts~~ quartz glass tube having an inner diameter of 16 mm and equipped in a stainless steel reactor

at the temperature of about 10 °C at a flowing rate of 403 cc/min. 2,450 MHz of microwave is irradiated to the solution to heat the solution so that the temperature at the outlet of the reaction tube may be 74 °C. The pH value of the suspension discharged from the outlet of the reaction tube is controlled to 7.5 by adding 2N-ammonia water in a mixer to continuously prepare a hydrous zirconia salt.

Please replace the paragraph bridging pages 42-43 of the specification with the following amended paragraph:

0.06 mole of a zirconium oxychloride and 0.4g of hydroxy propyl cellulose are dissolved in one liter of the solvent mixture of 2-propyl alcohol and water (a molar ratio of 0.8) to prepare the aqueous solution of a zirconium salt. The aqueous solution of a zirconium salt is continuously supplied to a ~~quartz~~ quartz glass tube having an inner diameter of 16 mm and equipped in the first stainless steel reaction zone at the temperature of about 7 °C at a flowing rate of 910 cc/min. 2,450 MHz of microwave is irradiated to the solution to heat the solution so that the temperature at the outlet of the reaction tube may be 45 °C.

Please replace the first paragraph of Example 3 on page 44 of the specification with the following amended paragraph:

0.01 mole of zirconium oxychloride and 0.4g of hydroxy propyl cellulose are dissolved in one liter of the solvent mixture of 2-propyl alcohol and water (a molar ratio of 1.6) to prepare the aqueous solution of a zirconium salt. The aqueous solution of a zirconium salt is continuously supplied to a

~~quarts~~ quartz glass tube having an inner diameter of 12 mm and equipped in the first stainless steel reaction zone at the temperature of about 12 °C at a flowing rate of 362 cc/min. 2,450 MHz of microwave is irradiated to the solution to heat the solution so that the temperature at the outlet of the reaction tube may be 53 °C.

Please replace the paragraph bridging pages 44-45 of the specification with the following amended paragraph:

The intermediate product discharged from the outlet of the reaction tube is supplied to the second stainless ~~steel~~ steel reaction zone having a stirred type vessel and an inner diameter of 120 mm and height of 600 mm. The height of the liquid in the second reaction zone is maintained at 400 mm, and the intermediate product is stirred with a stirrer installed in an axial direction of the reactor. The heating oil to be recycled through the heating jacket equipped on the wall of the reaction zone is heated to 160 °C. The suspension discharged from the bottom of stirring vessel of the second reaction zone is heated to 78 °C.